

# RESERVE COPY PATENT SPECIFICATION

DRAWINGS ATTACHED

Inventors: ARTHUR WILLIAM MOSS and ANTONY JOSEPH DAVIES

975,009



975,009

Date of filing Complete Specification April 26, 1963.

Application Date July 19, 1962.

No. 27729/62.

Complete Specification Published Nov. 11, 1964.

© Crown Copyright 1964.

Index at acceptance: —F4 W5Y

International Classification: —F 24 b

## COMPLETE SPECIFICATION

### Improvements relating to Electric Heaters

We, H. FROST & COMPANY LIMITED, a British Company, of 34, Fieldgate, Walsall, Staffordshire, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:

This invention relates to electric heaters.

An object of the present invention is to provide an electric heater which can impart an attractive lighting effect when in use.

According to the invention, an electric heater includes, in combination with lamp and flicker-producing means, a concave reflector of trough form and a translucent viewing screen, said reflector being disposed vertically on end and being located so as to reflect forwards light from the lamp and flicker-producing means, and said translucent screen being disposed in front of the reflector.

Also, according to the invention, an electric heater includes, in combination with lamp and flicker-producing means, a plurality of concave reflectors which are each of trough form, or concave integral reflector sections which are each of trough form, and a translucent viewing screen, each reflector or integral reflector section being disposed vertically on end and being located so as to reflect forwards light from the lamp and flicker-producing means, and said translucent screen being disposed in front of the reflectors or integral reflector sections. The vertically-disposed concave reflector, or each of the vertically-disposed concave reflectors or integral reflector sections, may be of vertically-corrugated trough form.

The invention can be applied, for example, to electric fires of the imitation solid-fuel type.

Figure 1 of the accompanying drawings shows by way of example, and in diagrammatic vertical cross-section, an electric fire

constructed in accordance with the present invention.

Figure 2 is a horizontal section on the line II—II, Figure 1.

Figures 3, 4, 5, 6, and 7 show, in horizontal section, different modified forms of reflectors which may be used in constructions in accordance with the present invention.

Referring to Figures 1 and 2 of the drawings, an electric fire of the imitation solid-fuel type has one or more heating elements such as 1 disposed in front of a horizontal trough-shaped radiant-heat reflector 2. Mounted above the radiant-heat reflector 2 is imitation fuel 3 extending rearwards from the said reflector 2 and simulating coal or wood logs; and disposed beneath the imitation fuel 3, and spaced rearwards of the back of the heat reflector 2, are red or orange coloured lamps 4 each associated, in known manner, with a flicker-producing device 5 consisting of an apertured spinner 6 pivotally mounted on a bracket 7. When the lamps are switched on, the hot air therefrom causes the respective spinners 6 to rotate. Red or orange flickering light from the lamp and flicker devices is reflected forwards, so as to be directed forwards above the fuel 3, by a one-piece sheet-metal light reflector 8 consisting of a plurality of integral concave reflector sections 8a which are each of trough form and are disposed vertically on end rearwards of the lamp 4 and flicker-producing device 5, as shown. Spaced in front of the reflector 8, so as to lie in the path of the red or orange flickering light reflected, from the sections 8a of the latter, is a translucent viewing screen 15 disposed at the rear of the imitation fuel 3. The reflection by the reflector sections 8a of the red or orange flickering light from the lamps 4 and flicker-producing

45

50

55

60

65

70

75

80

BEST AVAILABLE COPY

devices 5 gives the effect of long vertically-shooting flames.

In the embodiment in Figures 1 and 2 the light reflector 8 has, as shown in Figure 2, five of the integral sections 8a, but if desired the light-reflector may have any other suitable number of concave sections 8a of vertically-disposed trough form, for example three sections, as shown in Figure 3.

Instead of the light-reflector means having a plurality of integral concave sections, 8a each of vertically-disposed trough form, the said reflector means may, if desired, consist of a single concave reflector 9 (Figure 4) of vertically-disposed shallow trough form, or of a plurality of separately-formed reflectors 10 which are each of vertically-disposed trough form and are disposed side by side as illustrated (in the case of an assembly of three reflectors 10) in Figure 5, the reflectors 10 being, if required, connected together at their respective adjacent side edges.

The vertically-disposed concave light-reflector, or each of the concave light-reflectors or light-reflector sections, may if desired be of a vertically-disposed trough form which is vertically corrugated, for example as illustrated (in the case of a reflector 11 having a plurality of sections 11a) in Figure 6, in which the corrugations are indicated at 12.

Any suitable number of lamps and flicker-producing devices may be provided, or the fire may have a single lamp and flicker-producing device.

The light-reflector means may, in the case where a single lamp and single flicker-producing device is provided, consist if desired of a plurality of concave reflectors 13 (Figure 7) (or concave reflector sections) each of vertically-disposed trough form and arranged as shown along an arc so that sidewardly-directed light from the single lamp and flicker-producing device combination (indicated here at 14), as well as rearwardly-directed light from the said combination, is reflected forwards by the reflector means.

The hereinbefore-mentioned translucent screen may be of a construction, wherein a panel is provided with closely-adjacent transverse lines, described in the specification of our Patent Application No. 957,591. The translucent screen may be, for example, of a corrugated form in horizontal cross-section, or of a vertical trough form having, in hori-

zontal cross-section, a single convex, or single concave, forwardly-presented surface. The light reflector can advantageously be sprayed with a suitable lacquer to give the flame effect a more realistic appearance. The invention can be applied to electric heaters other than electric fires of the imitation solid-fuel type, if desired. For example, the invention can be applied to an electric convector heater having a front window through which the lighting effect can be viewed.

#### WHAT WE CLAIM IS:—

1. An electric heater including, in combination with lamp and flicker-producing means, a concave reflector of trough form, and a translucent viewing screen, said reflector being disposed vertically on end and being located so as to reflect forwards light from the lamp and flicker-producing means, and said translucent screen being disposed in front of the reflector.

2. An electric heater including in combination with lamp and flicker-producing means, a plurality of concave reflectors which are each of trough form, or concave integral reflector sections which are each of trough form, and a translucent viewing screen, each reflector or integral reflector section being disposed vertically on end and being located so as to reflect forwards light from the lamp and flicker-producing means, and said translucent screen being disposed in front of the reflectors or integral reflector sections.

3. An electric heater as claimed in claim 1 or 2, wherein the vertically-disposed concave reflector, or each of the vertically-disposed concave reflectors or integral reflector sections, is of vertically-corrugated trough form.

4. An electric heater, as claimed in any one of claims 1 to 3, wherein the said heater is an electric fire of the imitation solid-fuel type.

5. An electric fire substantially as herein described with reference to Figures 1 and 2 of the accompanying drawings.

6. An electric fire, substantially as herein described with reference to any one of Figures 3 to 7 of the accompanying drawings.

H. N. & W. S. SKERRETT,  
24, Temple Row, Birmingham, 2,  
Agents for Applicants.

975009

COMPLETE SPECIFICATION

1 SHEET

*This drawing is a reproduction of  
the Original on a reduced scale*

BEST AVAILABLE COPY

